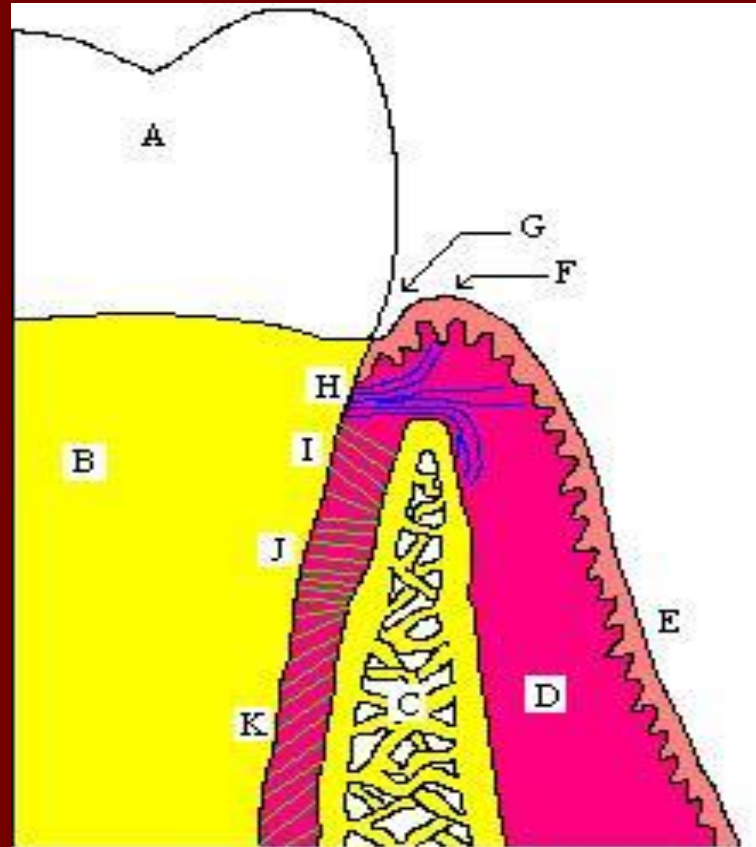


PERIODONTAL ASPECTS

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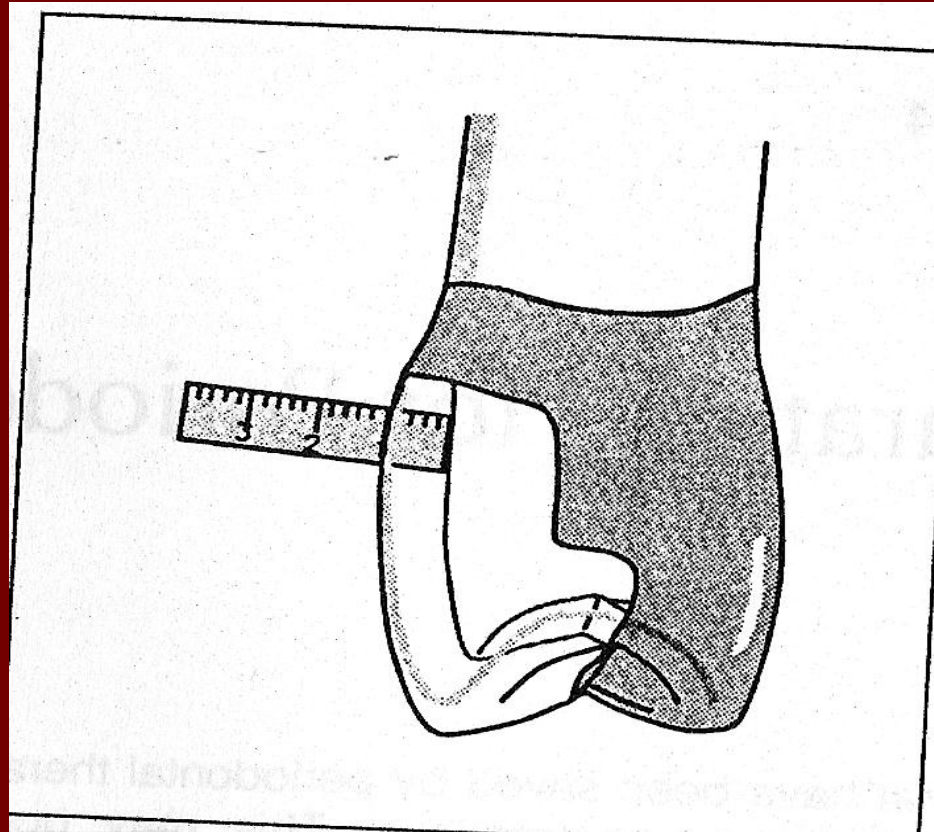
- Peridontal disease is one of the most common causes of tooth loss and fixed prosthodontic failure.
- The peridontium consists of: gingiva (free & attached), periodontal ligaments (dento-gingival attachment), cementum and alveolar bone.

Peridontium



- The optimum location of a finish line is on enamel, away from the gingival sulcus.
- Sometimes the crown margin is placed on the root, when there is gingival recession.
- In this case a chamfer FL instead of a shoulder for a PFM crowns is done with a metal collar.

Wide gingival collar to blend with the root contour



Crown Contours

- With any fixed prosthesis great attention to contours is needed to prevent any destruction of the surrounding peridontium.
- The Proximal Surface:
 - 1) the contact: normally in occl 1/3, middle 1/3 in molars
- Very wide contacts = narrow embrasure, crowding the interdental papilla.
- Very narrow contact = wide embrasure, food impaction

- Contact placed too occlusally = too wide cervical embrasure, loose papilla
- Contact placed too cervically = pressure on papilla and periodontal problems
- 2) The Embrasure

Function:

- protects tooth from food impaction
- deflects food giving gingival massage
- spillways for escapement of food
- relief of occlusal forces during chewing

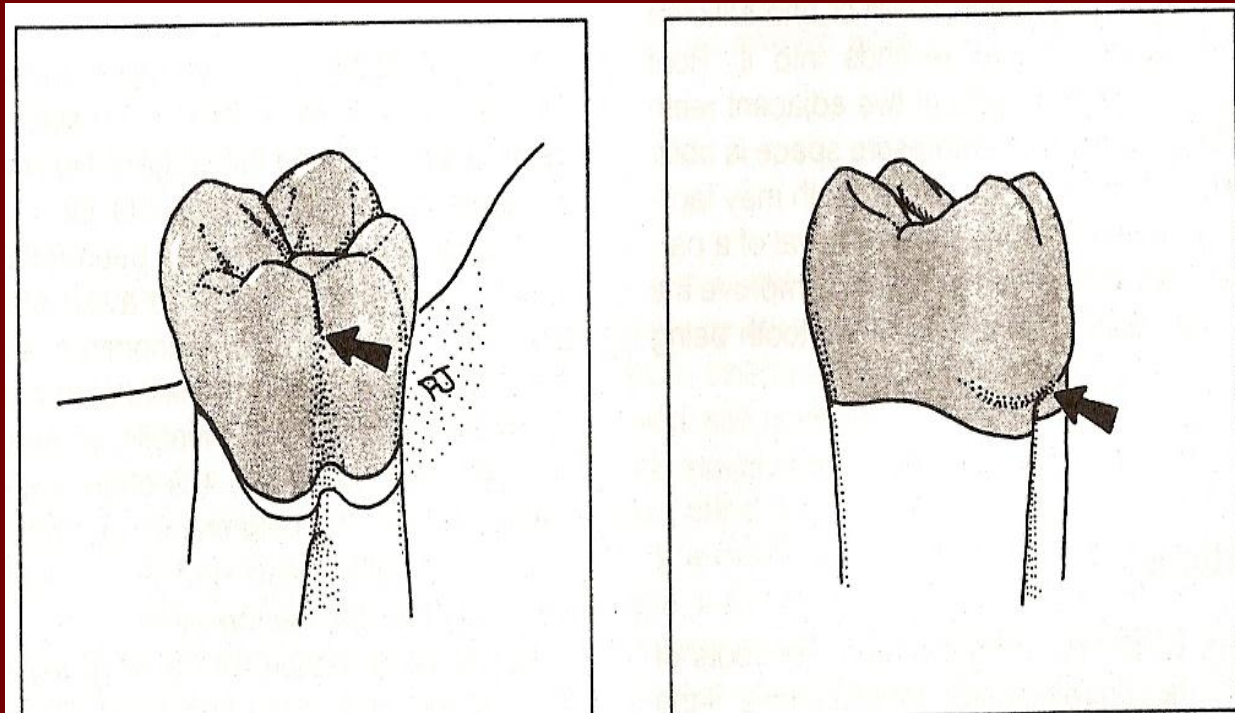
- Very wide embrasure = food impaction and gingival irritation
- Very narrow embrasure = pushes gingiva out of its normal position and irritation
- The Buccal & Lingual Contours
 - normally cervical 1/3 buccally, middle 1/3 lingually, which allows food deflection and massage of the gums
 - Overcontour = promotes food accumulation and plaque deposition
 - Undercontour = provides no gingival protection causing trauma

- Emergence profile: the part of the axial contour that extends from the base of the gingival sulcus as it emerges
- Significance: - prevents food impaction
- facilitates tooth brush
cleaning

Forcation Flutes

- Sometimes the finish line approaches the forcation, where the root trunk divides into two or three roots.
- Vertical flutes or concavities are necessary to maintain the normal contours.

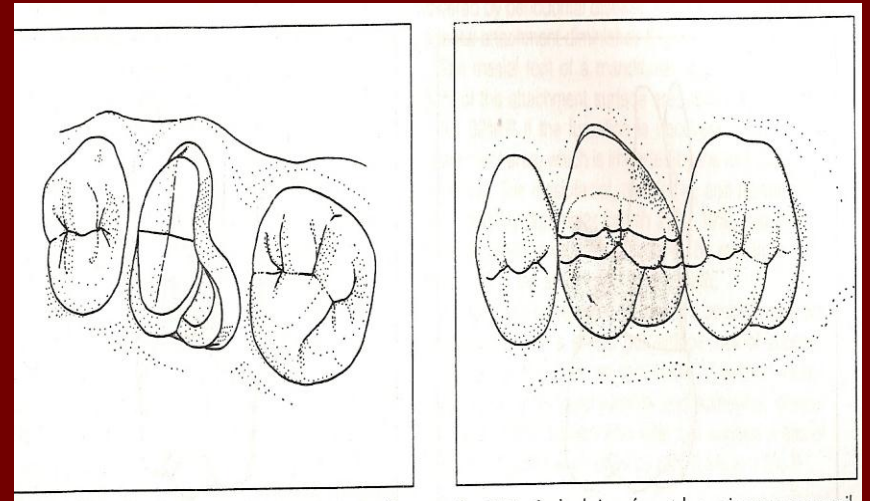
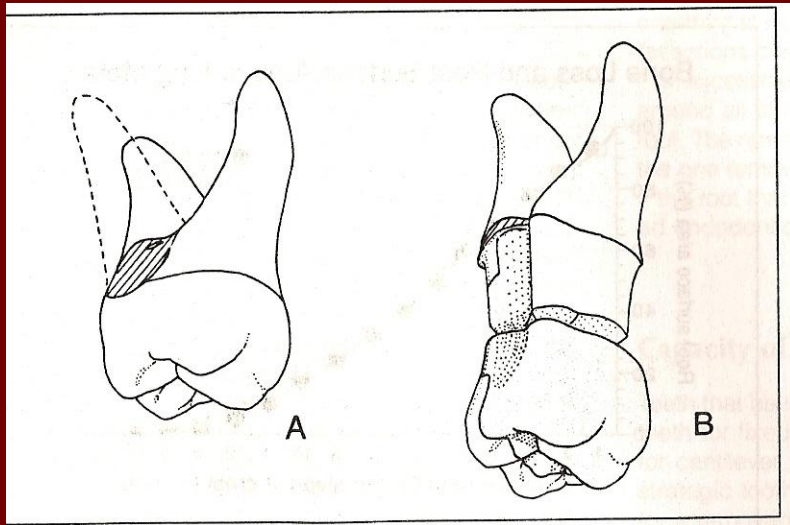
Fluting



Root Resection

- Defined as the removal of a root.
- Root amputation is the removal of a root without touching the crown.
- Hemisection is the when the tooth is seperated through the crown and forcation.
- Technique: RCT is usually done first, a loong thin diamond stone is used to cut to the forcation area, no root overhangs should be left to prevent plaque acculilation.

Maxillary Distofacial Root



Maxillary Palatal Root

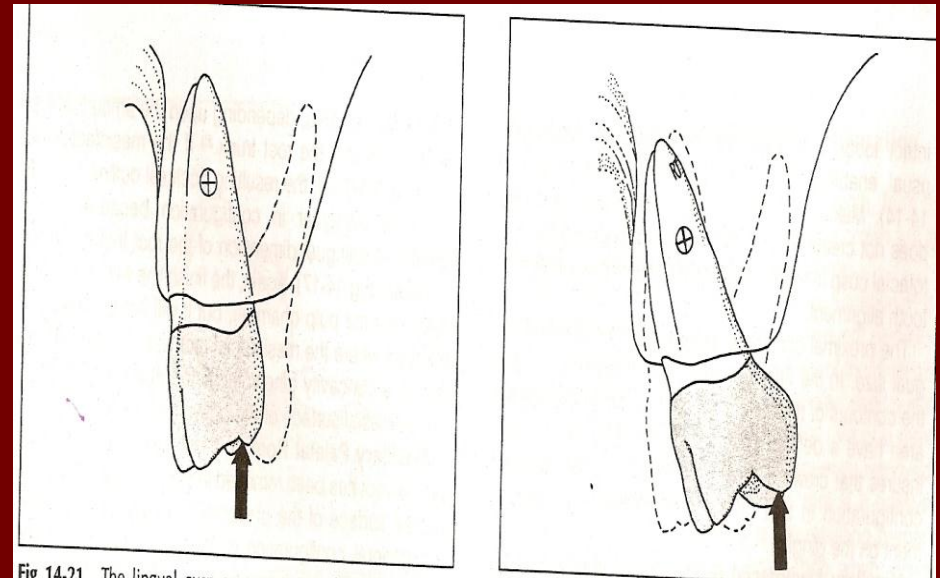
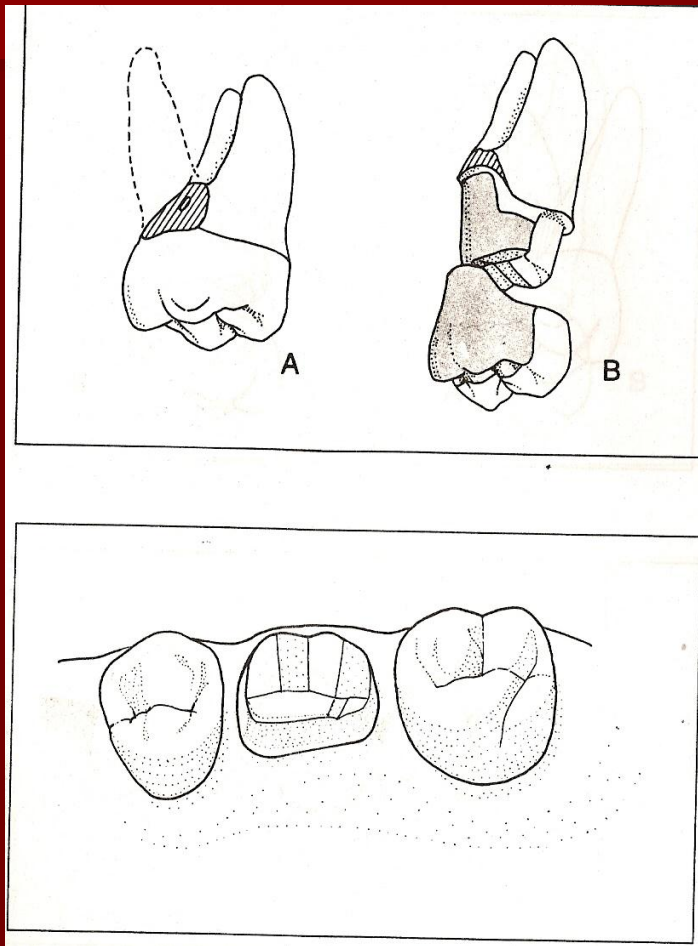
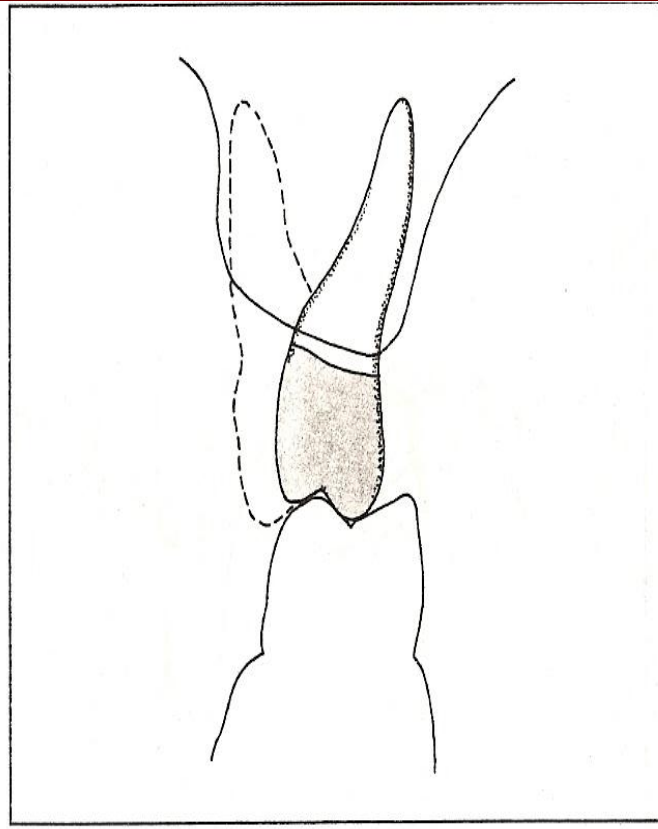
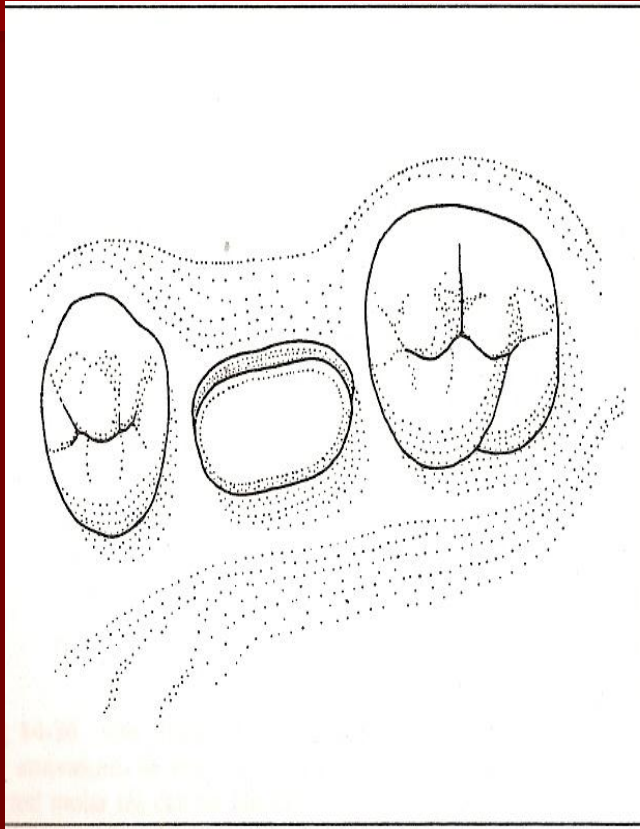
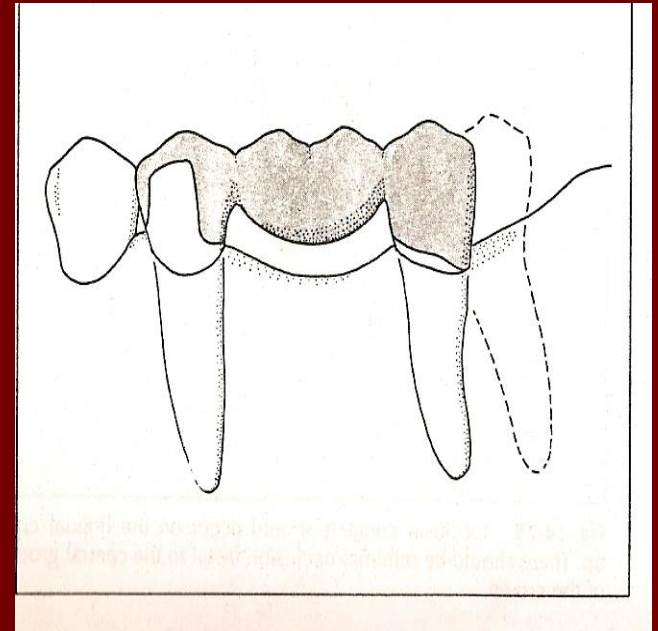
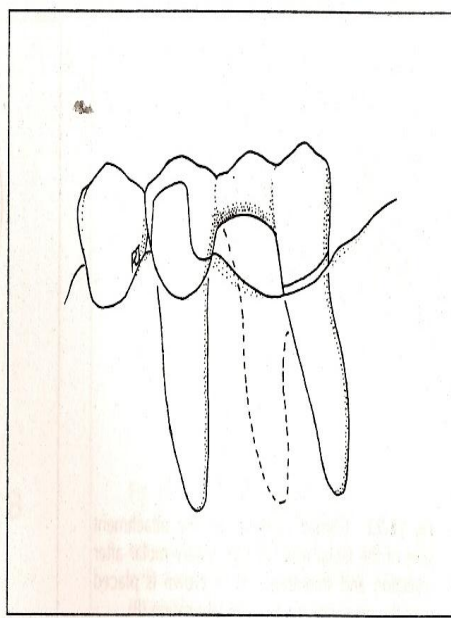
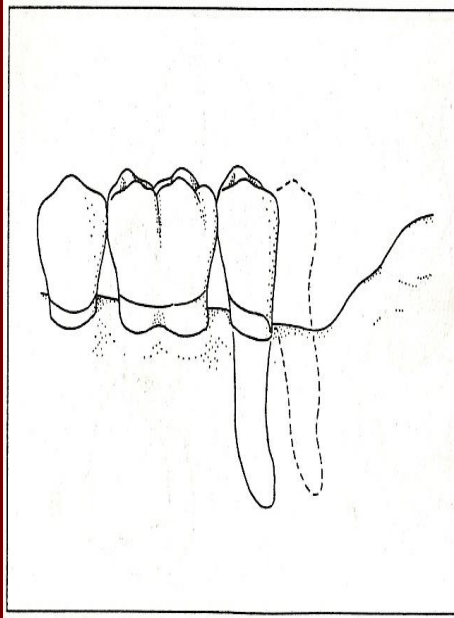


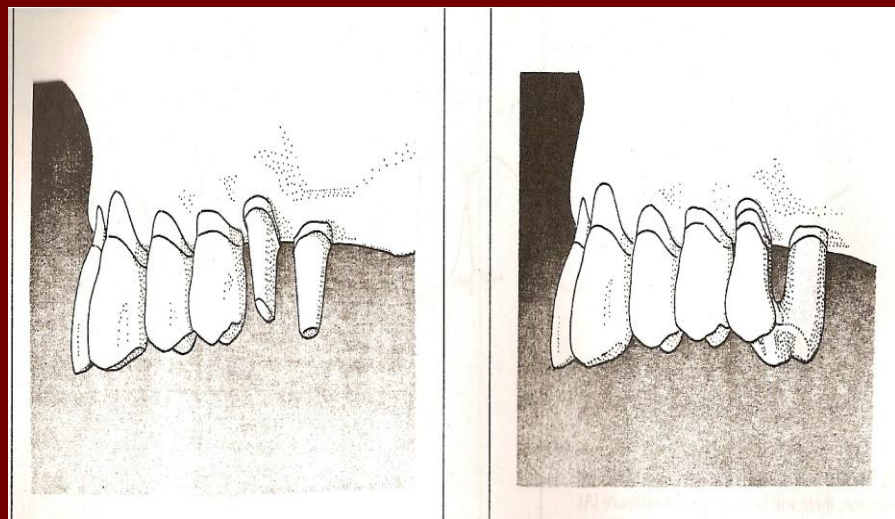
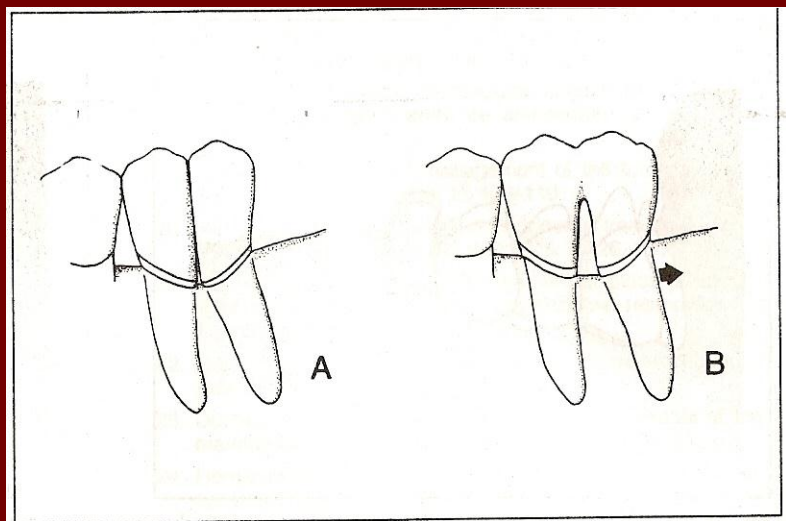
Fig 14.21 The lingual axis

Maxillary Facial Roots



Mandibular roots





Malocclusion

- Another cause of periodontal loss.
- Tooth able to withstand longitudinal forces, if the forces are horizontal, oblique or torquing, then destruction occurs.
- The magnitude, frequency and duration of the applied forces affect the period.
- If the loading is within the physiological limits of the tissue then adaptive thickening occurs, if above = pathological changes.
- Therefore, the dentist should direct forces along the long axis, restore normal anatomy, eliminate destructive forces, especially torquing.

Splinting

- It is the joining of two or more teeth for the purpose of stabilization.
- Movement of teeth can be due to pathological movement caused by bone loss and periodontal pockets, or parafunctional habits.
- Benefits: redistribution of forces
prevention of super eruptn & migratn
redirection forces on the abutments

Methods of splinting

- Temporary – wiring

 - removable appliance

 - composite splint, e/o wire

 - glass fiber instead of wire

Permanent – Fixed restoration, full coverage
or partial coverage, resin bonded bridge